

**REMARKS/ARGUMENTS**

This application has been carefully considered in light of the Non-Final office action dated June 10, 2010.

Claims 56-57, 62-65 and 67-69 remain in the application. Claims 58-61 and 66 are being cancelled with this amendment. Claims 1-55 were previously cancelled. Claims 56, 57 and 67 are currently being amended. The current amendments to the claims are fully supported by the specification. Even in light of these amendments, no new matter has been added.

**The Examiner is rejecting claims 58, 60, and 66 under 35 U.S.C. 112, first paragraph for failing to comply with written description.**

More specifically the following reasons are given: claims 58, 60 and 66 recite the limitation of "biocidal compound, 1-bromo-3-chloro-5.5-dimethyldantoin."

The specification has been amended to correct the typographical error in the spelling of 1-bromo-3-chloro-5.5-dimethyldantoin (BCD). Even in light of the amendments to the specification, no new matter has been added.

**The Examiner is rejecting claims 56, 57, 59, 61-65 and 67-69**

**under 35 U.S.C. 103(a), as obvious over US Patent 6,514,306 to Rohrbach.**

Rohrbach provides new and improved fibrous means where said fibrous element includes: at least one containing member, at least one anti-microbial agent placed inside at least one containing member (col. 2, line 26 - col. 3, line 17) where the containing members contain the anti-bacterial compound and where the containing elements possess different embodiments, amongst them, the containing element 20 consisting of an elongated fiber which includes an internal cavity 22 with a longitudinal opening 24 inside which is placed the anti-microbial agent (col. 6, lines 20-36).

The function of these containing elements is to retain, given the characteristics of their construction, with various shapes and materials (20, 40, and 50), the anti-microbial agents inside them, and to allow them to selectively diffuse from said containing elements and through the filtering means thanks to the increased humidity. Therefore, these containing members have entry and exit means to allow the impregnation and diffusion of the anti-microbial agent (col. 4, lines 7-16), understanding from Rohrbach that the function of the containing elements is limited to the action of containing the anti-microbial agent either on their internal or external surfaces, or on both, however, the

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element that will be a filter is the fibrous mat, and not the aforementioned containing elements.

However, in the Applicants' claimed invention there are no additional elements in the filter, the fibers of the non-woven fabric are modified during their manufacture with the anti-microbial agent and biocide allowing, once the non-woven tissue has been manufactured, the functioning of said filter as a filter that avoids Legionella (paragraph 0002, US2007/0202770). Hence, in the Applicants' claimed invention, the fiber will be treated with these compounds during its manufacture, but not the non-woven fabric obtained with said untreated fibers, furthermore, a particular humidity percentage will not be necessary in order to achieve the migration of the antibacterial agent. Likewise in the Applicants' claimed invention, said agent does not migrate; it is part of the whole nucleus and fiber body.

Therefore, based on the discussion above as well as the current amendments to the claims, Rohrbach would not render the Applicants' independent claims 56, 57, and 67 obvious. Nor would claims that depend therefrom and carry all the limitations of be rendered obvious by Rohrbach.

**The Examiner is rejecting claims 58, 60, and 66 under 35 U.S.C. 103(a), as obvious over US Patent 6,514,306 to Rohrbach**

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**when applied to claims 56, 57, 59, 61-65 and 67-69 above, in view of US Publication Application 2003/0031687 to Falder, US Patent 2,920,997 to Wolf and US Patent 5,603,941 to Farina.**

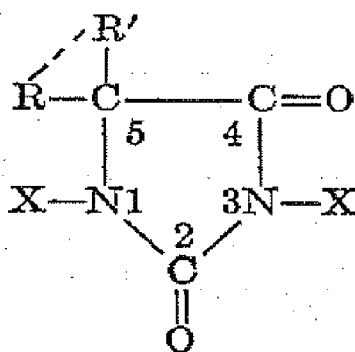
With regard to Falder (US 2003/0031687), it consists of an antimicrobial composition including compounds with high surface tension, low surface tension, an anti-microbial agent and a polar solvent. The need to treat biofilms with different types of anti-microbial agents is mentioned, given the characteristics which are common in the formation of biofilms, made up of simple species and various species of microorganisms, and it is also mentioned that the anti-microbial agents vary in their effectiveness, being limited to a certain type of microorganism, so the application of combinations of these is suggested to treat the biofilms. Amongst the compounds mentioned there is a dichloro derivative of hydantoin. This composition is used to prevent the formation of microorganism colonies on a surface.

Additionally, the Examiner has included two, new references Wolf and Farina as relevant to claims 58 and 60 when combined with Rohrback. Both Wolf and Farina correspond to patents of chemical compounds and their derivatives, which documents inform about the use of halogenated derivatives of hydantoin, in one case as an antifungal (Wolf) and in the other case as a biocide (Farina), however, in both documents, these compounds are part of

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a composition to carry out its action efficiently, in one case as a bio-dispersant (Farina), and in the other case with a relatively inert tensoactive agent (Wolf).

Wolf specifically describes a fungicide composition which includes hydantoin, with formula:



where it is mentioned that X can be selected from the group including chlorine and bromine, and R and R' can each contain inferior alkyl groups, this compound is presented in combination with a relatively inert surfactant.

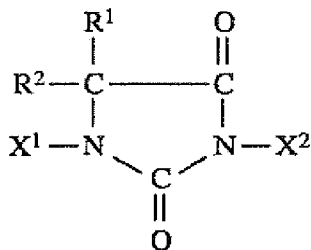
Although there is information about the substitutions of halogens in the X positions, there is no specific mention amongst the examples of embodiment or the preferred substitutions about using, in said antifungal composition, the compound used in the Applicants' claimed invention namely, 1-bromo-3-chloro-5,5-dimethylhydantoin. However, the use of this composition is particularly focused on the protection of solid surfaces and,

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despite mentioning that said composition can be used on fibrous material (cloth, felt fabrics, fabric fibers), its application on this type of material would require the use of a relatively inert surfactant or an adjuvant as dispersant (column 3, lines 27-38), furthermore, there is no specific mention about the use of the composition on a filter used to this end and, on the other hand, its application is superficial when used on these fibrous materials.

Therefore, Wolf does not include the compound as described and claimed in the Applicants' claimed invention namely, 1-bromo-3-chloro-5,5-dimethylhydantoin.

On the other hand, Farina et al. (US5603941) informs of a solid, stable composition that includes a) a biodispersant, and b) a halogenated biocide. The general formula of the biocide is: where R<sup>1</sup> and R<sup>2</sup> can independently be ethyl or methyl groups, and X<sup>1</sup>, X<sup>2</sup> are independently chlorine and bromine.



For the aforementioned uses the biodispersant is the

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material used mainly for the elimination or inhibition of biofilm.

Generally, this document does not explicitly inform of the application of this compound for Legionella, or its application in filtration systems.

Unlike Farina in the Applicants' claimed invention the use of Hydantoin derivatives with groups that substitute chlorine-bromine, is carried out by including them directly in the formation of the fiber, that is, inside said fiber and not in solid shape on the surface and, furthermore, without the need to include it as part of a composition.

The Applicants' claimed invention provides an effective filtration system against Legionella integrating, in the manufacture of the fiber used in the manufacture of the non-woven fabric, the antibacterial and biocide compounds necessary for its elimination. Said filter shows an ability to carry out this task, as is shown through tests or contributed proof.

Therefore, the combination of Rohrbach as discussed above and as combined with Falder, Wolf and Farina would not render the Applicants' claimed invention obvious. In other words, the combination of the references does not lead to a filter with the characteristics described in the Applicants' claimed invention for the used detailed therein, nor is there a description of the

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specific combination of Triclosan (5-chloro-2-(2,4-dichlorophenoxy)phenol) and 1-bromo-3-chloro-5,5-dimethylhydantoin integrated in the body and nucleus of the fiber used for the manufacture of the non-woven fabric, which will be used as a filter to eliminate this microorganism as found in the Applicants' claimed invention.

**The Examiner is rejecting claims 57, 61, 64, 65 and 67 under 35 U.S.C. 103(a), as obvious over Rohrbach in view of US Publication Application 2003/0205137 to Bolduc.**

Based on the discussion of Rohrbach in the preceding paragraphs as well as the current amendments, the combination of Rohrbach and Bolduc would not render the Applicants' claimed invention obvious.

**The Examiner is rejecting claim 60 under 35 U.S.C. 103(a), as obvious over Rohrbach in view of Bolduc as applied to claims 57, 61, 64, 65 and 67 and further in view of Falder, Wolf and Farina.**

Therefore, based on the discussion above as well as the current amendments to the claims, Rohrbach does not render the Applicants' claimed invention obvious. Therefore, the combination of Rohrbach, Bolduc, Falder, Wolf and Farina would



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not render the Applicants' invention obvious.

**The Examiner is rejecting claim 69 under 35 U.S.C. 103(a), as obvious over Rohrbach when applied to claims 56, 57, 59, 61-65 and 67-69, in view of Foss.**

Therefore, based on the discussion above as well as the current amendments to the claims, Rohrbach does not render the Applicants' claimed invention obvious. Therefore, the combination of Rohrbach and Foss would not render the Applicants' invention obvious.

**Finally based on the arguments as outlined above as well as the amendments to the claims, it is respectfully requested that all rejections be removed and a subsequent notice of allowance be issued.**

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An earnest effort has been made to place this application in condition for formal allowance, which action is requested. Should the Examiner have any questions regarding the allowability of the claims, it is requested that an interview be granted with applicant's representative prior to taking any action that may be considered as final. Any fees necessitated by the filing of this response may be charged to Deposit Account 04-1577.

Respectfully submitted,

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